

Amendments to the Claims:

The following listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1-37. (Canceled)

38. (Previously Presented) A method for removing a deposit accumulated in an apparatus for producing a semiconductor device, said method comprising bringing a cleaning gas into contact with said deposit accumulated in an apparatus for producing a semiconductor device, thereby removing said deposit by a gas-solid reaction, wherein said cleaning gas comprises a hypofluorite.

39. (Previously Presented) A method according to claim 38, wherein said hypofluorite is a compound having at least one OF group in the molecule and optionally having at least one group selected from the group consisting of halogen atoms, ether groups, alcohol groups, carbonyl groups, carboxyl groups, ester groups, amine groups, and amide groups.

40. (Previously Presented) A method according to claim 39, wherein said hypofluorite is selected from the group consisting of CF_3OF , $\text{CF}_2(\text{OF})_2$, $\text{CF}_3\text{CF}_2\text{OF}$, CH_3COOF , $(\text{CF}_3)_3\text{COF}$, $\text{CF}_2\text{HCF}_2\text{OF}$, $(\text{CF}_3\text{CF}_2)(\text{CF}_3)_2\text{COF}$, CH_3OF , CFH_2OF , CFH_2OF , CF_2HOF , $\text{CF}_3\text{CF}_2\text{CF}_2\text{OF}$, and $(\text{CF}_3)_2\text{CFOF}$.

41. (Previously Presented) A method according to claim 40, wherein said cleaning gas further comprises an inert gas.

42. (Previously Presented) A method according to claim 40, wherein said deposit is selected from the group consisting of B, P, W, Si, Ti, V, Nb, Ta, Se, Te, Mo, Re, Os, Ru, Ir, Sb, Ge, Au, Ag, As and Cr, and oxides, nitrides, carbides and alloys of these elements.

43. (Previously Presented) A method according to claim 40, wherein said cleaning gas comprises 1-100 volume % of said hypofluorite.

44. (Previously Presented) A method according to claim 43, wherein said cleaning gas further comprises at least one gas component selected from the group consisting of oxygen and oxygen-containing gases.

45. (Previously Presented) A method according to claim 44, wherein said at least one gas component is in an amount from 0.4 to 90 volume% based on a total volume of said at least one gas component and said hypofluorite.

46. (Previously Presented) A method according to claim 44, wherein said oxygen-containing gases are selected from the group consisting of CO₂, CO, NO, NO₂, and N₂O.

47. (Previously Presented) A method according to claim 38, wherein said cleaning gas is at a temperature from 10 to 700°C.

48. (Previously Presented) A method according to claim 38, wherein said cleaning gas has a pressure from 0.1 to 760 Torr when said removing said deposit is a plasma-less cleaning, or a pressure from 1 mTorr to 10 Torr when said removing said deposit is a plasma-assisted cleaning.

49-62. (Canceled)